What is Claimed Is:

1. A stent adapted for expansion from a collapsed delivery configuration to an expanded deployed configuration, the stent having, in the deployed configuration, a curvature relative to a longitudinal axis of the stent.

2. The stent of claim 1 further comprising a self-expandable structure adapted for expansion from the collapsed delivery configuration to the expanded deployed configuration.

3. The stent of claim 2, wherein the self-expandable structure of the stent is formed by laser-cutting a tubular member.

4. The stent of claim 1, wherein the curvature of the stent is configured to match an internal profile of an implantation site within a patient's body lumen.

5. The stent of claim 4, wherein the curvature of the stent is configured to reduce restoring forces applied by the stent to the implantation site.

6. The stent of claim 4, wherein the curvature of the stent is configured to match a 3-dimensional map of the internal profile of the implantation site.

7. The stent of claim 4, wherein the curvature of the stent is custom-manufactured to match the internal profile of the implantation site.

8. The stent of claim 4, wherein the curvature of the stent is statistically matched to the internal profile of the implantation site.

9. The stent of claim 1, wherein the curvature of the stent is formed by heat treating the stent while it is arranged with the desired curvature.

10. The stent of claim 6, wherein the 3-dimensional map is formed by a technique chosen from the group consisting of ultrasound imaging, intravascular ultrasound imaging, angiography, radiography, magnetic resonance imaging, computed tomography, and computed tomography angiography.

11. The stent of claim 1 further comprising a delivery catheter adapted to selectively maintain the stent in the collapsed delivery configuration.

12. The stent of claim 11, wherein the delivery catheter comprises an inner sheath and an outer sheath, the outer sheath removably disposed about the inner sheath, the stent concentrically disposed between the inner and outer sheaths in the collapsed delivery configuration.

13. The stent of claim 12, wherein the delivery catheter further comprises radiopaque marker bands, the stent disposed between the marker bands.

14. The stent of claim 12, wherein the delivery catheter further comprises an imaging transducer.

15. The stent of claim 1, wherein the stent is fabricated from a material chosen from the group consisting of superelastic materials, biocompatible materials, and biodegradable materials.

16. The stent of claim 1, wherein the stent is flexible in the collapsed delivery configuration.

17. The stent of claim 1, wherein a thickness of a wall of the stent changes along the longitudinal axis of the stent.

18. The stent of claim 1 further comprising a coating at least partially covering the stent.

19. The stent of claim 18 wherein the coating is configured to perform an action chosen from the group consisting of retarding restenosis, retarding thrombus formation, and delivering therapeutic agents to the patient's blood stream.

20. The stent of claim 1 further comprising:

a tubular body with a wall having a web structure,

the web structure comprising a plurality of interconnected, neighboring web patterns, each web pattern having a plurality of adjoining webs, each adjoining web comprising a central section interposed between first and second lateral sections,

wherein the central section is substantially parallel to a longitudinal axis of the stent when in the collapsed delivery configuration, each of the first lateral sections joins the central section at a first angle, each of the second lateral sections joins the central section at a second angle, and adjacent ones of the neighboring web patterns have alternating concavity.

21. The stent of claim 20, wherein the first angle comprises a first obtuse angle, and wherein the second angle comprises a second obtuse angle.

22. The stent of claim 20, wherein each adjoining web has a bowl-like appearance.

23. The stent of claim 20 further comprising a plurality of connection elements configured to interconnect the plurality of web patterns.

24. The stent of claim 20 further comprising a plurality of transition sections configured to interconnect neighboring web patterns.

25. The stent of claim 20, wherein the number of adjoining webs that span a circumference of the stent is selected corresponding to a vessel diameter in which the stent is to be implanted.

26. The stent of claim 1 further comprising secondary apparatus for plastically deforming the stent during expansion of the stent from the collapsed delivery configuration to the expanded deployed configuration, thereby imposing the curvature along the longitudinal axis of the stent in the deployed configuration.

27. The stent of claim 26, wherein the secondary apparatus comprises a balloon catheter adapted for expansion from a collapsed delivery configuration to an expanded deployed configuration, the balloon catheter comprising curvature along a longitudinal axis of the catheter in the deployed configuration.

28. The stent of claim 27, wherein the curvature of the balloon catheter is configured to match an internal profile of an implantation site within a patient's body lumen.

29. The stent of claim 28, wherein the curvature of the balloon catheter is configured to match a 3-dimensional map of the internal profile of the implantation site.

30. The stent of claim 28, wherein the curvature of the balloon catheter is custom-manufactured or is statistically matched to the internal profile of the implantation site.

31. The stent of claim 27, wherein the curvature of the balloon catheter is formed by heat treating the balloon catheter while it is arranged with the desired curvature.

32. A method for stenting at a tortuous implantation site within a patient's vessel with reduced restoring forces, the method comprising:

providing a stent adapted for expansion from a collapsed delivery configuration to an expanded deployed configuration, the stent having, in the deployed configuration, a curvature relative to a longitudinal axis of the stent;

percutaneously delivering the stent to the tortuous implantation site within the patient's vessel in the collapsed delivery configuration;

aligning the stent with an internal profile of the implantation site; and

deploying the stent to the expanded deployed configuration, the stent engaging the implantation site and the curvature of the stent tracking the site's internal profile.

33. The method of claim 32, wherein providing the stent further comprises providing the stent with a

self-expandable structure adapted for expansion from the collapsed delivery configuration to the expanded deployed configuration.

34. The method of claim 32, wherein providing the stent further comprises providing the stent with a tubular body having a wall with a web structure,

the web structure comprising a plurality of interconnected, neighboring web patterns, each web pattern having a plurality of adjoining webs, each adjoining web comprising a central section interposed between two lateral sections, wherein the central section is substantially parallel to a longitudinal axis of the stent when in the collapsed delivery configuration, and adjacent ones of the neighboring web patterns have alternating concavity.

35. The method of claim 32 wherein deploying the stent to the expanded configuration comprises releasing the stent from a mechanical restraint.

36. The method of claim 32, wherein aligning the stent with an internal profile of the implantation site comprises radially and longitudinally aligning the curvature of the stent with the internal profile.

37. The method of claim 32, wherein aligning the stent further comprises using an imaging modality to align the curvature of the stent.

38. The method of claim 32, wherein providing a stent comprising curvature further comprises matching the curvature with the internal profile of the implantation site.

39. The method of claim 38, wherein matching the curvature with the internal profile of the implantation site comprises custom-matching or statistically-matching the curvature.

40. The method of claim 38, wherein matching the curvature with the internal profile comprises plastically deforming the stent with secondary apparatus having curvature that matches the curvature of the internal profile.

41. The method of claim 40, wherein the secondary apparatus comprises a balloon catheter.

42. Apparatus for plastically deforming a stent, the apparatus comprising a balloon catheter adapted for expansion from a collapsed delivery configuration to an expanded deployed configuration, the balloon catheter comprising curvature along a longitudinal axis of the catheter in the deployed configuration.

43. The apparatus of claim 42, wherein the curvature of the balloon catheter is configured to match

an internal profile of an implantation site within a patient's body lumen.

44. The apparatus of claim 42, wherein the curvature of the balloon catheter is configured to match a 3-dimensional map of the internal profile of the implantation site.

45. The apparatus of claim 42, wherein the curvature of the balloon catheter is custom-manufactured or is statistically matched to the internal profile of the implantation site.

46. The apparatus of claim 42, wherein the curvature of the balloon catheter is formed by heat treating the balloon catheter while it is arranged with the desired curvature.

47. The apparatus of claim 42 further comprising a stent disposed about the balloon catheter.